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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/983,082	10/23/2001	Hitoshi Ishizaka	Q66850	8945

7590 01/13/2005
SUGHRUE, MION, ZINN, MACPEAK & SEAS, PLLC
2100 Pennsylvania Avenue, N.W.
Washington, DC 20037

EXAMINER

LEE, DOUGLAS S

ART UNIT	PAPER NUMBER
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2125

DATE MAILED: 01/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.		Applicant(s)	
	09/983,082		ISHIZAKA, HITOSHI	
	Examiner		Art Unit	
	Douglas S Lee		2125	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 October 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>7/22/2004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1- 4 are rejected under 35 U.S.C. 102(b) as being anticipated by Zachman et al. (US Pat. # 5,111,406).

Regarding claims 1, Zachman et al. disclose a method for boring a hole in a circuit board, comprising the steps of: a first step of acquiring a first position data for positioning the hole in said circuit board (see figs.4 and 5, cols. 3-5), employing a positioning device having an image pick-up function (see fig.1, col. 1); a second step of boring the hole in said circuit board, employing a working apparatus having an image pick-up function and a boring function, said second step further including: a sub-step of acquiring a second position data for positioning said circuit board in said working apparatus, by said image pick-up function of said working apparatus; a sub-step of determining the boring position on said circuit board in said working apparatus by synthesizing the first position data acquired in said first step and said second position data; and a sub-step of boring the hole at a predetermined position in said circuit board by said boring function of said working apparatus (see figs. 1-6, cols. 3-6).

Regarding claim 2, Zachman et al. disclose a method for boring a hole in a circuit board wherein said circuit board has a first positioning mark that is the positional reference for boring the hole in a pattern within said circuit board, and a second positioning mark that is the positional reference of said circuit board in said working apparatus, wherein said

first step includes a sub-step of acquiring said first position data on the basis of said first positioning mark and said second positioning mark obtained by picking up the image of said first positioning mark and said second positioning mark on said circuit board by said image pick-up function of said positioning device, and wherein said sub-step of acquiring said second position data in said second step includes acquiring said second position data on the basis of the position of said second positioning mark obtained by picking up the image of said second positioning mark on said circuit board by said image pick-up function of said working apparatus (see figs. 1-6, cols. 3-6).

Regarding claim 3, Zachman et al. disclose a method for boring a hole in a circuit board further comprising the steps of, a first picking up step for picking up an image of said circuit board by a first image pick-up unit provided in said positioning device, a first data processing step for processing said first position data on the basis of the image of said circuit board obtained in said first image pick up process, and a second moving step for moving said circuit board relative to said first image pick-up unit, a second picking up step for picking up an image of said circuit board by a second image pick-up unit in said working apparatus, a second data processing step for processing said second position data on the basis of the image of said circuit board obtained by said second image pick-up unit as well as synthesizing said first position data and said second position data, a second moving step for moving said circuit board relative to said second image pick-up unit, and boring a hole in said circuit board on the basis of said first and second position data synthesized in said second data processing process (see figs. 1-6, cols. 3-6).

Regarding claim 4, Zachman et al. disclose a boring device for a circuit board comprising: a positioning device including a first image pick-up unit for picking up an image of said circuit board, a first data processing unit for providing a first position data on the basis of said image obtained by said first image pick-up unit, and a movement unit for moving said circuit board relative to said first image pick-up unit; and a working apparatus including a second image pick-up unit for picking up an image of said circuit board, a second data processing unit for providing a second position data on the basis

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of said image obtained by said second image pick-up unit as well as synthesizing said first position data and said second position data, a second movement unit for moving said circuit board relative to said second image pick-up unit, and a boring unit for boring a hole in said circuit board on the basis (see figs. 1-6, cols. 3-6).

Conclusion

1. Any inquiry concerning this communication or earlier communications from the examiner should be directed to examiner Douglas Lee, whose telephone number is (571) 272-3745. The examiner can normally be reached on Monday-Friday from 8:00AM- 4:30PM.

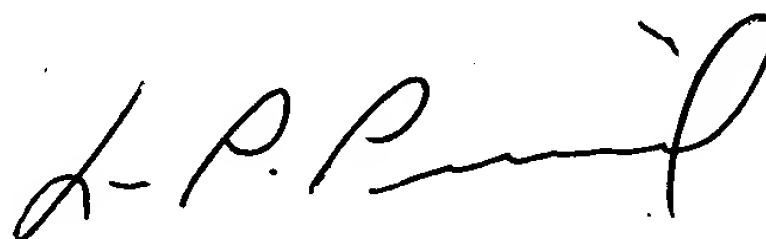
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, *Leo Picard*, can be reached on (571) 272-3745 or via e-mail addressed to [*leo.picard@uspto.gov*]. The fax number for this Group is (703) 872-9306.

Communications via Internet e-mail regarding this application, other than those under 35 U.S.C. 132 or which otherwise require a signature, may be used by the applicant and should be addressed to [*doug.lee@uspto.gov*].

All Internet e-mail communications will be made of record in the application file. PTO employees do not engage in Internet communications where there exists a possibility that sensitive information could be identified or exchanged unless the record includes a properly signed express waiver of the confidentiality requirements of 35 U.S.C. 122. This is more clearly set forth in the Interim Internet Usage Policy published in the Official Gazette of the Patent and Trademark on February 25, 1997 at 1195 OG 89.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 306-5631.

Douglas Lee
01/06/2005



LEO PICARD
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100